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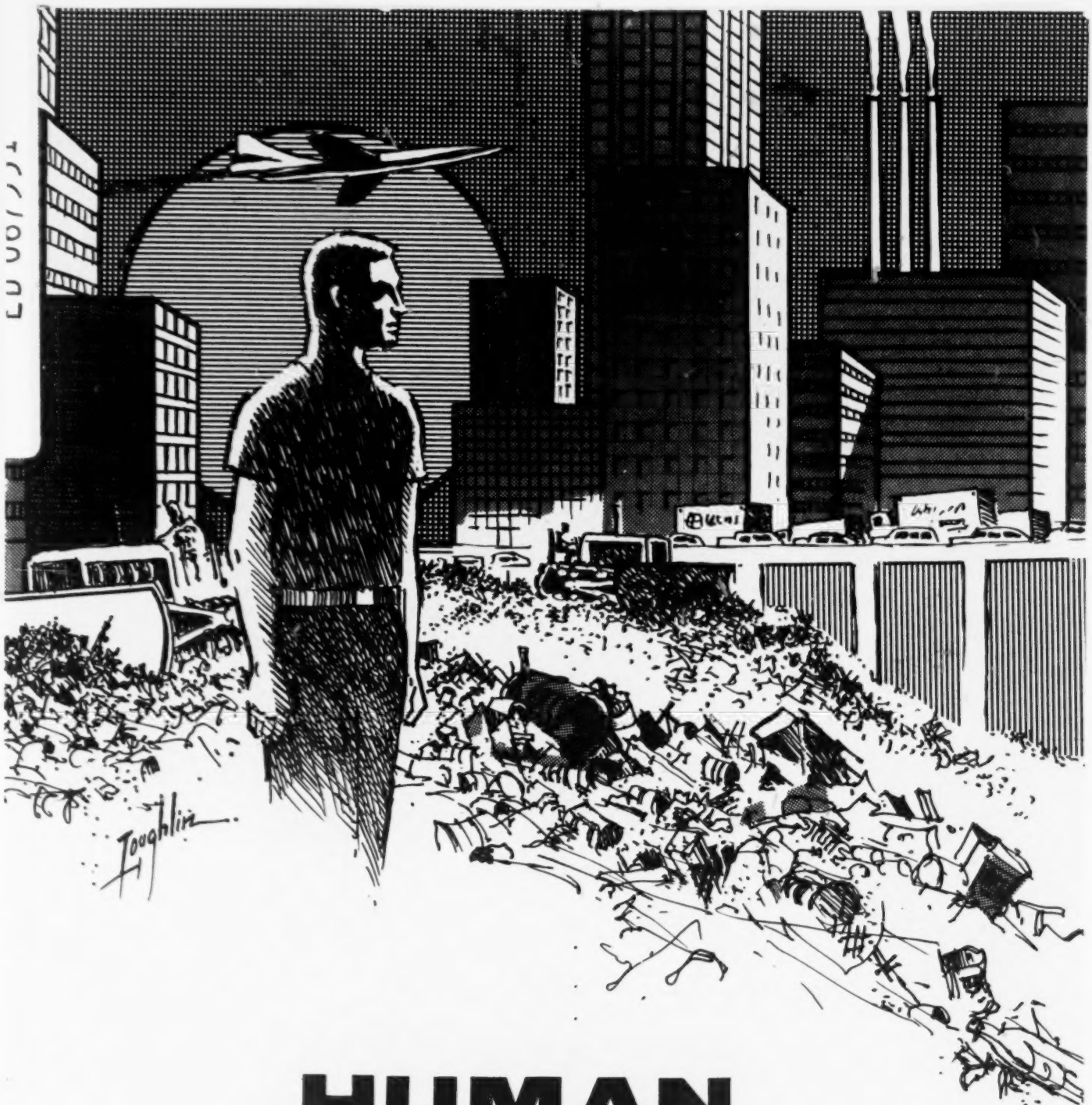
ABSTRACT

An inservice course offered to elementary and secondary teachers and other concerned citizens in Rhode Island was presented in fifteen television programs. This study guide includes a description of the fifteen sessions. For each there is given a brief introduction and summary, an outline, questions for further study, and a bibliography of required and optional reading materials. Also included is a detailed bibliography and information about sources from which additional instructional materials can be obtained. The interdisciplinary approach begins with ecology and human environment and moves to the geographical concept of man's surroundings and his relationship to them. Two sessions on population discuss composition, sex ratio, age, growth, and economic development. Food, resources and land conservation lead to a study of social problems: poverty, crime, educational disadvantagement, unemployment, housing and urban planning. Man's environment is again examined in terms of pollution; community action is explored; and, in the final session, questions are asked leading to ways of introducing in the curriculum the factors discussed. (JMB)



HUMAN ECOLOGY

ED 067351

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H U M A N E C O L O G Y

STUDY GUIDE

&

COURSE OUTLINE

STATE AGENCY FOR ELEMENTARY AND SECONDARY EDUCATION

SALVE REGINA COLLEGE

Prepared and Edited by

Dr. Gamal Zaki

Acknowledgement

Dr. David Warren
Mr. Lee Gardner
Mr. Ralph Lataille
and staff of WSBE Channel 36

where? Rhode Island

date?

HUMAN ECOLOGY

INTRODUCTION

It is an unfortunate fact that only a few exceptional schools and teachers are really preparing young Americans to appreciate and to influence in an intelligent fashion the physical environments in which they will spend their lives. A mere handful of higher education centers are producing environmental specialists who are prepared to work hand-in-glove with other kinds of specialists and laymen. The physical environments we occupy, and the natural resources upon which life depends, are manageable only as complex-ever-changing, living systems, and within close limits which men ignore at great peril.

It is entirely conceivable that the environmental inheritance of those who live 20 years hence will be quite wretched. Therefore, we must accelerate now the application of now-known and feasible conservation methods to the management of land, water, and air. If we do not, the long-haul goals of conservation education may prove truly "academic" in every sense of the word.

One hears much about today's environmental crises -- blighted cities, sprawling suburbs, degraded air and water, diminished wilderness and wildlife, and several more -- but really, if one examines the recent legislative record in Washington and numerous state capitols, one finds a surprising array of new authority, and some funds, for public action directed to these ills. At the same time, there are obvious grounds for fear that new programs for city renewal, open space protection, pollution control and water conservation, among others, will go under-nourished.

And the principal nourishment must come from citizens and community officials who understand enviornmental problems, who appreciate the conservation tools at hand and commit themselves to action.

Unless those who would be served by clean water, livable cities, healthful recreation opportunities, and all the rest -- unless they (or at least many more among them) become informed, inspired and active in these matters, we shall all receive a very small bang for our government buck; laws will go unenforced, and program goals will be missed. Even the best government cannot effectively renew waterways, enforce pesticide controls or create new uses of land in the absence of informed community support and participation from those affected. Thus, conservation remains a highly political animal.

I suggest that, if schools are going to deal effectively with a wide range of complex community problems, they are going to have to apply interdisciplinary approaches to their solution. I suspect that many schools are poorly equipped to meet this need. It is for this reason that the State Agency for Elementary and Secondary Education has asked Salve Regina College to cooperate in an in-service program of this kind, and that together we are offering it to teachers and other concerned citizens of the state.

William P. Robinson, Jr.
Director
State Agency for Elementary
and Secondary Education

HUMAN ECOLOGY

AN INTERDISCIPLINARY APPROACH

I. COURSE REQUIREMENTS:

1. A thorough knowledge of the material presented in the fifteen TV programs. (See Appendix A for Schedule)
2. Observation of films relevant to the course which will be broadcast in conjunction with the fifteen programs. (See Appendix B for Schedule)
3. Studying the assigned chapters of required readings.
4. Final Examination which will be held at Salve Regina College, Newport. Date: Saturday, January 23, 1971 (Further information concerning the final examination will be sent to each student prior to mid semester.

II. REQUIRED BOOKS:

1. Walt Anderson (ed.), Politics and Enviornment; A Reader in Ecological Crises, Goodyear Publishing Company, Inc., 1970
2. Mithcell Gordon, Sick Cities, Penquin Books, 1963
3. Population pamphlets. (see Appendix C)
4. Harold W. Helfrick, Jr., (ed.), The Environmental Crisis, Yale University Press, 1970

The majority of the texts are in paperback form and will be available for purchase on or about October 1, 1970 at the following bookstores:
Salve Regina College Bookstore, Newport.
University of Rhode Island Bookstore, Kingston, R.I.
Rhode Island College Bookstore, Providence, R.I.

III. MEETINGS

Two meetings with the instructors of the course will be held at Salve Regina College on the following dates:
Saturday - November 28, 1970; 1:00 pm - 3:00 pm
Saturday - January 16, 1971; 1:00 pm - 3:00 pm
These meetings are designed to provide the students with an opportunity to meet with the instructors and direct any questions pertaining to the course. Attendance is optional, however, students are encouraged to attend due to their importance.

IV. REGISTRATION

By Mail: August 24 - October 10
In Person: At Salve Regina College, Registrar's Office - September 14-18 (9-4 pm)
September 21-23 (9-4 pm)
(7-9 pm)
at the Cranston Y.M.C.A., Park Avenue - September 21 - 23 (7-9 pm)

V. FEE:

$5 per credit hour -	$15
$5 Registration fee -	5
Total	$20

VI. INSTRUCTORS:

Dr. David Warren, Chairman, Department of Political Science,
University of Rhode Island

Dr. Gamal Zaki, Professor of Sociology,
Rhode Island College

Mr. Lee Gardner, Ecologist, Member of the Audubon Society,
Director, Norman Bird and Wildlife Sanctuary,

VII. SPECIAL CONSULTANTS:

Agency for Elementary and Secondary Education, Coordinator
Mr. Ralph H. Lataille, Consultant in Social Studies

VIII. GUESTS:

William P. Robinson, Jr., Director, State Agency for Elementary and Secondary Education
Sister Mary Christopher O'Rourke, President, Salve Regina College
C. Edward O'Loughlin, Dean of Continuing Education, Salve Regina College
Grace Glynn, Associate Director, State Agency for Elementary and Secondary Education
Donald Driscoll, Curriculum Director, Providence School Department
Robert Shapiro, Social Studies Supervisor, Warwick School Department

IX. FINAL EXAMINATION

The final examination will be held at Salve Regina College Campus and/or other designations to be announced. The exams will be held Saturday, January 23, 1971. Detailed information concerning the final examination will be sent to each student about the mid-semester. The examination will be objective in nature - (True or False and Multiple choice).

X. HOW TO USE YOUR STUDY GUIDE:

1. Your study guide includes a fair description of the fifteen sessions. For each session you will find a brief introduction and summary of the presented material, an outline, some questions for further study, and bibliography indicating the required and optional reading material. Included in the study guide you will find a detailed bibliography and information about sources from which you can obtain instructional material relevant to the course.

2. It is recommended that you read your assignments before viewing the program. You will notice that the material which you will not find in your reading assignments are adequately presented in the study guide.

3. The questions listed after each session are to help you further your study, and not necessarily the questions you will find on your final exam, since the exam will be an objective one.

FIRST SESSION

Participants:

Dr. David Warren
Dr. Gamal Zaki
Mr. Lee Gardner
Mr. Ralph Lataille

The main objective of this session is to introduce the course to students; its goals, structure, and scope. The discussants will be dealing with the following dimensions:

I. Definitions:

1. Ecology
2. Human Ecology

II. Human Ecology: An Interdisciplinary Approach:

1. The biological approach and perspective
2. The sociological approach and perspective
3. The political science approach and perspective
4. The need for an integrated approach

III. Scope of Course:

1. Selected Areas and their importance
2. Limitations

IV. Summary and Conclusions:

QUESTIONS

1. "Ecology is the most used and abused term in our society"

   a. Define the term "ecology". What are the implications and limitations of this definition?
   b. Why should we develop an interdisciplinarian approach to understand our ecological problems?

2. Identify some of the ecological problems facing the human society.

SECOND SESSION

The Human Environment

Presentation by: Mr. Lee Gardner

The term environment means the surroundings of an organism or population of organisms. In reference to man, the human environment includes the entire world since man now occupies or is surrounded by all land and water forms.

The ecologist refers to this broad environment as the "Biosphere" (the living world). It can be broken down into six major systems. These are:

1. The climate system
2. The hydrologic system
3. The edaphic system
4. The plant system
5. The animal system
6. The saprobe system

Of these six major systems man is part of the animal system and is one of the orders of consumers. He is, therefore, directly dependent on all other five systems. In this respect he is no different from any other species.

When a particular area of an environment is available, a population will move into it. This is called invasion or immigration. If the area provides all necessary ingredients for the population to survive (biotic potential) the population will increase (prolferation). As the population gets larger a greater demand is placed on the resources of the environment (environmental decline). The population then also begins a decline (increased mortality) and if not leveled off or stabilized it will become extinct in that area (emmigration).

Men's entrance into a similar area is usually different since man's techonology can overcome environmental decline. However, since man can use his resources more fully than a natural species, the collapse, when it comes, could be disastrous on a global scale.

The human population, then faces the problem of either reverting to a non-technical society in order to maintain resources or making physical and psychological changes to adjust to the environmental decline or becoming extinct.

Presentation Outline

I. Introduction:
- Description of Man's environment; the biosphere, physical and organic foundations.
- Environmental needs

II. Acqusition of Environmental Needs:
- Natural populations without technology
- Technology and the optimum use of environment
- Environmental decline and the positive feedback system

III. Crisis in the Optimum Environment:
- Natural population tend to destroy its environment
- Socio-cultural and psychological adaptations

IV. Summary and Conclusions:
- Discussion of the role of technology
- The relationship between ecological problems and value system of society

QUESTIONS

1. Describe how a single individual relates to each of the six systems. Now do the same with any animal you might be familiar with. Now compare the two and notice similarities and differences. Are human beings, as individuals, different in their relationship to the Biosphere than any other animal?
2. If you had to describe the ecosystems in the Biosphere as a continuous cycle what would you put to either side of the animal system?
3. Natural populations increase only if the Biotic potential is there to allow it. When the environment declines so also does the population. Man's population seems to be increasing world wide which would indicate that we have plenty of "biotic potential" and that there is no real worry. What factor allows man's population to increase that is not also a factor in natural populations?
4. Assuming our environment is changing what is the quickest way for man to solve the problem of survival; through physical changes, psychological changes, or technological changes? How would this be instituted?
5. What biological fact would lead you to consider the answering of the above question as a waste of time?
6. Refute the statement: Technology has caused most of our environmental problems. If we eat out technology we will survive.

Bibliography

Required:

Anderson, Politics and Environment, pp. 152-153, 181-204
Helfricher, The Environmental Crisis, pp. 1-14, pp. 127-142

Optional:

Raymond Dasmon, Environmental Conservation, pp.9-24
A.S. Mossman, "Environmental Crisis and the Wild Life Ecologist," BioScience, Vol. 14, July 15, 1970, pp. 813-815
R.T. Wright, "The Responsiblity for the Ecological Crisis," BioScience, Vol. 20, August 1970, pp. 851-854

THIRD SESSION

HUMAN ECOLOGY: THEORIES AND APPLICATION

Presentation by: Dr. Gamal Zaki

I. INTRODUCTION:

1. The work "ecology" is derived from the Greek oikes - a house or place to live in. Ernest Heckel, the German biologist, is credited with being the first to use the term ecology, employing it in his study of plants in 1868. Ecology is commonly defined as the study of "the relation of organisms or groups of organisms to their environment."

2. The first use of the phrase "Human ecology" was by Robert E. Park and Ernest Burgess in 1921. Human ecology deals with the spatial aspects of the symbiotic relations of human beings and human institutions. Today the greatest sociological use of ecology is in the study of urban structure, ascertaining the "typical constellations of persons and institutions" in cities and their environs - and their multiform variations.

3. Park posited that "most if not all cultural changes in society will be correlated with changes in its territorial organization, and every change in the territorial and occupational distribution of the population will effect changes in the existing culture." His postulation of an intimate congruity between the social order and physical space, between social and physical distance, and between social equality and residential proximity is the crucial hypothetical framework supporting urban ecological theories.

4. Three levels of aggregation are the focus of study: the neighborhood, the the city, or the region.

II. Ecological Organization of Human Communities:

1. In all communities, and particularly in urban communities, the population seems to distribute itself in recognizable patterns within the land area occupied by an identifiable community. These patterns within the land area are accompanied by some coordination and implicit or explicit regulation. Taken together, these patterns constitute the ecological organization of human communities.

2. Ecological organization deals with: (1) the typical ways in which urban populations and their dominant activities are arranged in urban areas; (b) the interrelations between these urban segments; and (c) changes in these patterns.

3. Human behavioual and cultural patterns cannot be understood in an abstract form; they have to be studied within the physical context in which they develop. These patters reflect a continuous process of the accommodation and adaptation of human beings to their physical environment for the sake of survival. This process reflects the universal human problem of devising creative accommodations between a variety of socio-cultural needs and a more or less differentiated physical environment.

III. Urban Ecological Units and Patterns:

1. The Concentric Zone Theory: (Park and Burgess)
The best known approach to the ecological analysis of cities basic features of theory are as follows:

- Zone I is situated in the center of the city, the area of the main business district and of the most intensive land use. Administrative functions for the commerce, finance, and management of the city are located here. The populations of the area are transient residents in hotels and the daytime population of commuting workers in offices and stores.
- Zone 2, the zone in transition, land is held by real estate speculators in anticipation of Zone I expansion and consequent higher land values in zone 2. This leads to unwillingness to improve the property which is old and detoriorating. This area in transition is associated with delinquency and crime and different types of deviations. This is the area of concern in almost all cities, it is the area of blight and detorioration. It provides residences for groups which because of financial or other reasons are unable to find more desirable places to live.

- Zone 3. "The zone of workingmen's homes", is a lower class residential area, it includes immigrant groups who have improved their status and have been able
- Zone 3, Called residential area 2, for middle calss residents.
- Zone 4, called residential area 3, for upper incomes.
- Zone 10, the commuters zone. It lies on the outer periphery of the city. It includes suburbs beyond the city limit.

Burgess and his associates found in their Chicago study a number of social characteristics which could be expressed as rates were distributed in an orderly way from the center of the city to the periphery; i.e., home ownership increased with distance from the center of the city, the percentage of the population foreign born, the percentage of male juvenile delinquency, and the sex ratio were all the highest in the center of the city and declined toward the periphery.

The theory assumes that urban development and growth is relatively uniform in all directions from the center, though topographical features (rivers, lakes, hills) are recognized as distorting factors. Davis and Fiery found out that the concentric zone theory is not directly applicable to New Haven and Boston, while others found it applicable to New York and St. Louis.

The concentric zone theory appears most applicable to cities of rather rapid growth that (1) were not impeded by hills or other peculiarities of the topography, (2) were not greatly influenced by the automobile, and (3) developed during the period of mass European immigration.

2. The Sector Theory: (Hoyt)

The theory views the large city as a number of sectors rather than concentric zones. It is a realistic supplement to and modification of the concentric zones. Hoyt found that urban growth could be described as a series of residential "fingers" expanding in radial fashion around major transportation routes toward the outskirts of the city. Each sector tends to reflect segregation of population groupings according to income and social status and thus helps to account for some of the deviations from expected zonal patterns. He found out fashionable areas, for example, do not occupy a whole concentric zone, but rather occupy segments of zones just outside the fashionable areas of earlier periods. He also found out that populations tended to move along well defined axes of transportation as the city grew, with higher income groups showing a greater rapidity of movement than lower income groups.

3. The Multiple Nuclei Theory: (Harris and Ullman)

They suggest that the land-use patterns of many cities are organized around several distinct nuclei rather than a single center. The nuclei are distinguished by their functions and the relation of the functions to certain kinds of terrain or communication. They hypothesized that four factors determine the rise of nuclei, certain activities require specialized facilities; like activities tend to group together; certain unlike activities are incompatible; and some activities cannot afford the high rents of the most desirable.

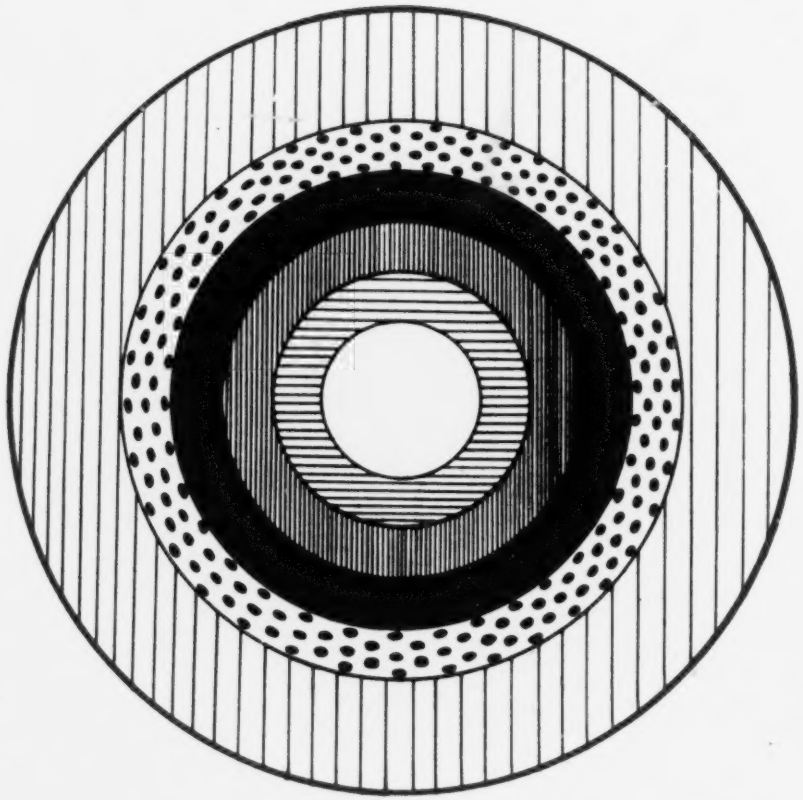
Criticism and Applications:

Most of the approaches of ecological organization are essentially static portrayals confined to a single time; change is studied by comparing two "photographs" of ecological structure taken at different times. McKenzie differs by being interested in ecological processes inducing or reflecting change. Some of these processes are:

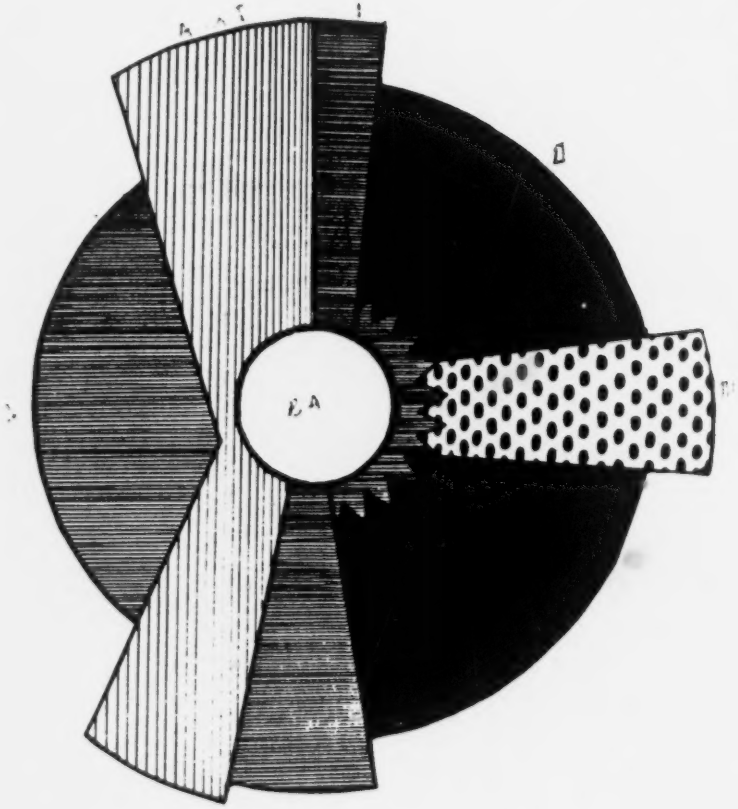
1. Concentration: Massing of people in an area
2. Deconcentration: the outward movements from existing clusters.
3. Centralization: gathering of people around a pivotal point; i.e. business area.
4. Segregation: Clustering together of similar people or institutions a sifting of population groups and land uses into harmonious types.
5. Invasion: Penetration of one group or function into an area dominated by a different group or function.
6. Succession: The complete displacement of the established group or use from an area by an invading group.

- These processes are useful for describing the alterations that constantly occur in urban areas.

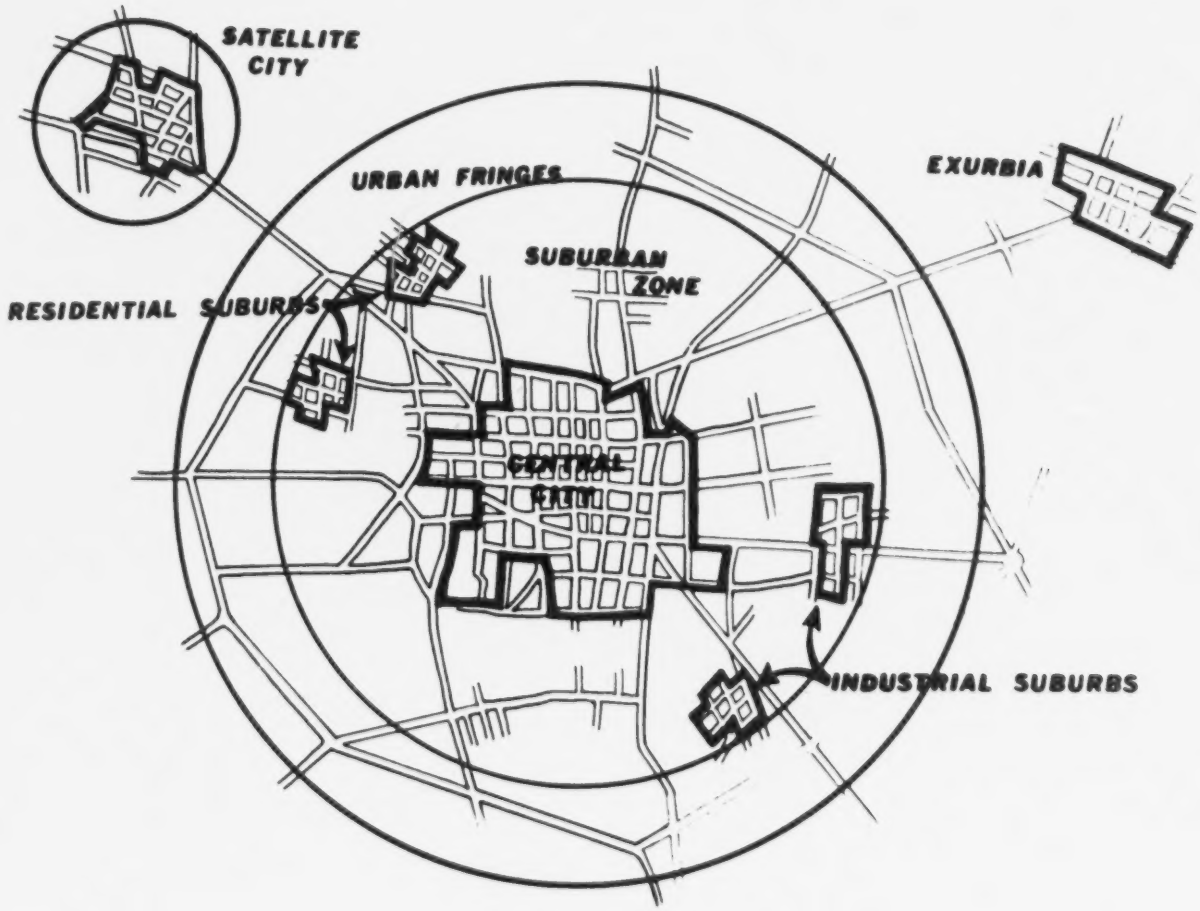
- The study of ecological organization is essential in understanding the human phenomena. As in any other science, the ultimate objectives are prediction and control. Has man succeded in his efforts to utilize his environment for his own survival?!! The study of ecological organization may provide us with an answer.



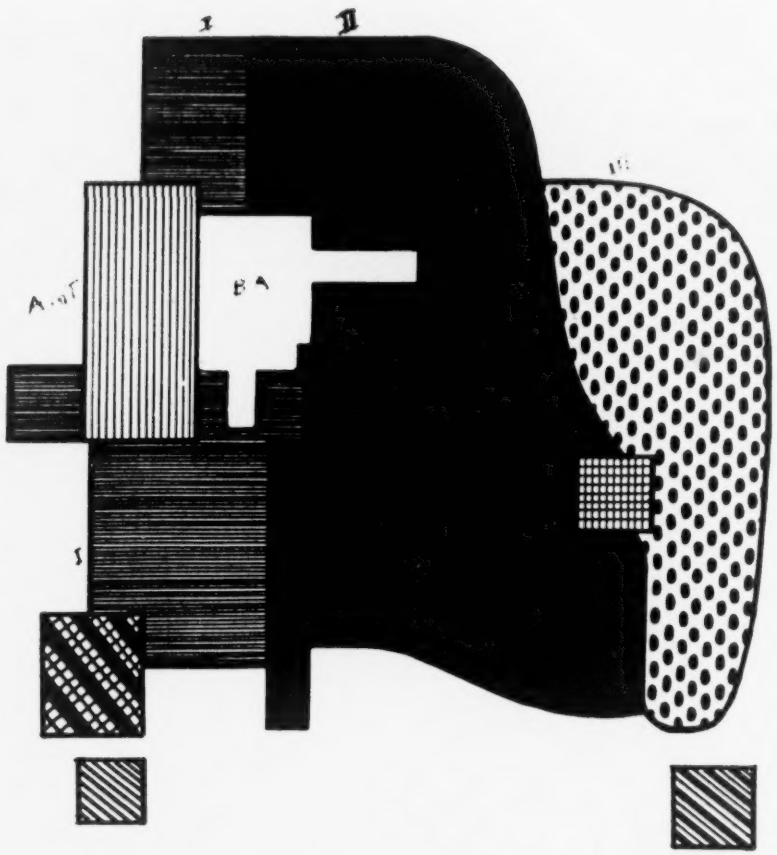
CONCENTRIC ZONE THEORY



SECTOR THEORY



THE URBAN REGION



MULTIPLE NUCLEI

PRESENTATION OUTLINE

I. Introduction:

- Space as a social force
- Human and Urban Ecology Definition
- Relationship with other disciplines

II. The Shape of Urban Regions

- Theories of Spatial Distribution
- Ecological Processes
- Areas of Social Disorganization
- Urban Sprawl

III. Pollution of the Human Environment

- Problems of the urban region

IV. Summary and Conclusions:

QUESTIONS:

1. Is there a risk that ecology as a topic for inquiry and research will lead to a kind of determinism: that is, it may be thought that space and its characteristics determine the social forms that lie within it?

2. What are some of the differences between animal-plant ecology and human ecology? What are the risks of drawing human ecology principles from the observations of the adaptation of the lower animals and plants to their environment?

3. Human ecology is based primarily on generalizations which may not apply to every situation, is it possible that ecological predictions will ever be precise?

4. Ecology as a term, recently has been widely used and abused, is it possible that all human problems are ecological in nature?

5. Ecologists have been warning us that man will eventually destroy his environment unless he takes immediate measures to stop exploiting and abusting it, what are your reactions to these warnings?

BIBLIOGRAPHY

Required Readings:
1. Walt Anderson, Politics and Environment, pp. 152-203.
2. Mitchell Gordon, Sick Cities, Chapters 1, 13 and 14.
3. The American Federationist, The Urban Crisis, Pamphlet.
4. U.S. Department of Housing and Urban Development, Science and the City pamphlet.

Optional:
1. Alvin Boskoff, The Sociology of Urban Regions, Appleton, Century, Croft, 1969, Chapters 5, 6, and 7.
2. L. Broom and P. Selznick, Sociology, Fourth Ed., Chapters 9 and 13.
3. Amos Hawley, Human Ecology, Ronald Press, 1950, Reference Book.
4. Ralph Thomlinson, Urban Structure, Random House, 1970, Chapters 1, 2, 5, 7, and 8.

NOTICE: All theories discussed in program are found only in the optional readings list. Students should select at least one of the optional books and review the theories presented in program.

FOURTH SESSION

POPULATION I

Presentation by: Dr. Gamal Zaki

1. INTRODUCTION:

1. The study of population is an important source of knowledge about society. "A population" is the total number of human beings in a society or community. They man be counted and classified by age, sex, occupation, or any other useful criterion. Such data are then analyzed to measure social trends and to explore the underlying causes and significance of population facts, such as a delcining birth rate, a preponderance of males, or a high infantile mortality rate.

2. The technical study of human populations (DEMOGRAPHY), from the Greek demos meaning people, largely depends on the collection of statistics either from official records like birth, death, and marriage registrations or from periodic censuses.

3. The techniques of population analysis and ecology are essential adjuncts to sociological research. Human ecology is closely related to population analysis. Population increase can be viewed as a problem in ecology in that it involves a change in the relation between mankind and natural resources and increasing competition for limited land.

II. COMPOSITION:

1. Composition refers to the characteristics of a population according to significant biological or social categories, i.e., race, nativity, religion, sex, ages, occupation, education and urbanization. A description of composition is a cross-sectional view of population at a given time, but no population is ever truly stable. Certain basic facts about composition, for instance age and sex, contribute in many ways to the understanding of society and economy. The distribution of ages and the proportions of the sexes influence the marriage rate, the birth rate, the death rate, the ratio of producers to consumers, the percentages in the school or military ages, the numbers eligible for old-age assistance etc..

1. THE SEX RATIO:

1. The proportion of males to females within a population is called its sex ratio (SR) and is stated as follows:

$$\text{SEX RATIO} = \frac{\text{No. of males}}{\text{No. of Females}} \times 100$$

A SR of 100 means that the population is evenly divided between males and females, a figure greater than 100, that there are more males than females; a figure less than 100, that there are fewer males than females. Examples: Alaska's SR is 132 while Washington D.C. is 88. At birth the sex ratio for the whites in U.S. is 106, but at successively older ages the proportion of males diminishes, that is, the sex ratio declines with increasing age. The life expectancy for females is higher than for males.

2. AGE COMPOSITION:

The industrial and military potentials of a nation depends in large part on its

age composition. A population with heavy concentrations in the productive years has a larger labor force and a larger potential force for mobilization in time of emergency. A population concentrated at either extreme of the age distribution has a high dependency ratio, that is the number of nonproductive individuals is relatively great and burdens the productive population.

3. POPULATION PYRAMIDS:

The study of the population pyramids permits closer analysis of changes in the age and sex composition of a population.

III. FERTILITY AND MORTALITY:

1. The future of a population is determined by rates of birth and death and by immigration and emigration. If migration is held constant, analyses of detailed birth and death rates can be used to predict the size of a population, its potential growth or decline, and its age structure.

2. A simple way of measuring fertility is as follows:

$$\text{Crude Birth rate} = \frac{\text{No. of births in a year}}{\text{Midyear population}} \times 1000$$

(Discussion of disadvantages of this measure)

$$\text{Fertility Ratio} = \frac{\text{No. of children under 5}}{\text{Women aged 15-44 inclusive}} \times 1000$$

3. Fertility differentials: Groups within a population reproduce at different rates. Examples: Rural vs urban, the larger the city the lower is the fertility. Manual workers have more children than with collar workers.

4. $$\text{Death rate} = \frac{\text{No. of deaths in a year}}{\text{Midyear population}} \times 1000$$

IV. WORLD POPULATION GROWTH:

Rate of growth or natural increase..Example
Explanation of charts

Presentation Outline

I. Introduction:
- Definitions
- Importance of studying population
- Census
- Population pyramids
- Definitions and explanation of basic concepts and measures

II. World Population:
- Historical review
- The population problem
- World's Resources
- Where do we stand?

III. Summary and Discussion:

Questions

1. What are the consequences and implications of the population problem from the biological and political science points of view?

2. What are the causes of population growth?

3. Indicate the argument between the optimists and pessimists viewing the population conditions.

BIBLIOGRAPHY

Required Readings:

1. NET, The population problem, Pamphlet
2. Philip Hauser, World Population Problems, Pamphlet

Optional Readings:

1. Thompson and Lewis, Population Problems, McGraw Hill, 1969, Chapters 1,2, & 3.

Fifth Session

Population II

Presentation by: Dr. Gamal Zaki

I. INTRODUCTION:

1. The main objective of this session is to summarize the present population trends and the influence of these trends upon economic, political, and social conditions. As never before the world is faced with a drastic population increase.

2. A review of the historical development of population may provide us with insight and better understanding of the existing conditions. It is also important to study the causes and consequences which have been attributed to this growth. Considered here are the relationships between population and such matters as resources, the labor supply and employment, consumption and consumers' needs, the volume of production, the level of living and social progress.

II. THE DEMOGRAPHIC TRANSITION THEORY:

1. A study of population growth and changes in Western Europe indicates that the nations of this area have completed a certain cycle or transition from from agrarian to industrial cultures. This transition lasted from 75 to 150 years.

2. If we compare Western Europe with underdeveloped countries we notice that death rates sharply declined within the last thirty years with no comparable decline in birth rates which are originally high. This is due to the fact that better health standards have lead to the remarkable decline in mortality especially among infants.

3. Many have criticized the demographic transition theory indicating that what happened in Western Europe will not necessarily happen in underdeveloped countries.

III. POPULATION GROWTH AND ECONOMIC DEVELOPMENT:

1. Demographic, economic and social factors are mutually interdependent. The relationships between population and the economic and social environment are among the matters which must be understood if the fundamental reasons for mass poverty, for the wastage of human and physical resources, and for the economic and cultural retardation of many of the world's people are to be known. The need to reach such an understanding is greater now than ever before, since the nations of the world have recognized these economic and social problems as matters of common concern and have begun collective action for the purpose of solving them on a global scale.

2. Programs of social and economic development, to be planned in the most effective way, must take into account the present and future needs of the nation for food, housing, schools, agricultural implements, industrial machinery and raw materials, health services, and other requirements. Not the least important of the factors which determine these needs are the size of the population, its composition, spatial districution, and rate of growth.

3. The relationship between economic development and population growth is important. If underdeveloped countries seek economic development they have

to seriously consider their population rate of growth. Any economic development may be absorbed by the high rates of growth.

Presentation Outline

I. Introduction:
- Historical development of population growth
- Relationship between population size and standards of living

II. The Demographic Transition Theory:
- Western Europe
- Underdeveloped countries

III. Economic Development and Population Growth:
- Rates of growth and their effect on economic development
- Conditions in underdeveloped countries

IV. Summary and Discussion:

QUESTIONS

1. What are the effects of population growth on the following:
political conditions - housing - health services - education - food - supply - transportation - natural resources

2. Why should underdeveloped countries be concerned about the rates of growth of the their populations?

3. Discuss: "In some countries the rate of population growth is a more serious issue than the size of population."

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Required:
1. Jones, Does Overpopulation Mean Poverty?, Pamphlet
2. The Population Problem, Pamphlet

Optional:
1. United Nations, The Determinants and Consequences of Population Trends, 1953

SIXTH SESSION

FOOD

Presentation by: Mr. Lee Gardner

I. INTRODUCTION:

Food is the energy source for man's biological needs. The human species has gone through several progressive steps in improving food getting techniques. Three types may be identified:

1. Nomadic: Moving from one food source to another
2. Agrarian: Remaining in a food productin area and cultivating domestic plants and animals.
3. Urban: Development of agricultural areas outside living areas.

The basic problems of food, world wide, today are ones of:

1. Available land for food production world wide
2. Food production and human requirements for types of food.
3. Changing land use and demands on present farm land for other uses.
4. Future land available for food development.

As science seeks to answer questions on food production by the development of so called wonder grains, the basic problems are political in nature. Land use is not decided by agricultural scientists but by political considerations.

Today, man has been able to produce enough food to adequately feed the world. However, moving this food from production areas into high population areas has been confounded by social and political conditions.

Certain foods; i.e., the cereal grains, destroy land at an extreme rate, but the human population psychologically is unprepared to use other high energy foods to the same extent as the cereal grains are being used.

As the human population tends to increase, greater demand is being put on using farm land for other purposes. Industry, housing, nurseries, and other building requirements are decreasing our farm land by thousands of acres a year.

Despite the decline in acres of farm land there are still terrestial areas which have not been fully exploited. These are the tiaga, the deserts, and the jungle or tropical rain forests.

Secondly, with proper techniques, food production can be increased on present farm land.

Areas which are protected as natural areas have proven to be the highest protein producing areas in the world.

With the pressure on developing countries to produce their own food, miracle grains, and pesticides and fertilizers have been employed for short duration gains which have long term disastrous effects on the whole balance of nature.

The solution to these food problems is the development of political philosophy in land exploitation, food production and food distribution.

Presentation Outline

I. Introduction:

- Historical review; nomadic, agrarian, and urban societies
- Problems of food production, distribution and consumption

II. Land Use and Food Availability:
- Relationship between land and food production
- Changing land use
- Future land available for food production

III. Food Distribution:
- Transportation
- Government Policy (PL480)

IV. Summary and Conclusions

Questions

1. We seem to be going through a Green Revolution today with the development of pesticides, fertilizers, and wonder grains. Can we look for a break-through in the hungry nations food problems with the technicological advancements or are we actually increasing the food problem for a later date?

2. Cereal grains make up about one-half of the plant protein requirements for man. Why is it necessary to find suitable substitues for these grains?

3. Certain land areas have not been fully exploited for food production, these are: Tiaga, tropical forests, and deserts. What are the drawbacks to exploiting these areas?

4. Little or no mention was made of the ocean. Doesn't the ocean seem like a likely place to put our research efforts in food development?

5. Despite our scientific research in the area of food production why does it still exist as a world wide cirsis?

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OPTIONAL
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Department of Agriculture Yearbook, 1958 pp. 2-41 and pp. 386-391

Required:
Anderson, Politics and Environment, pp. 34-46
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Seventh Session

Land Conservation

Presentation by: Mr. Lee Gardner

I. INTRODUCTION

Historically, human populations have been migratory in one degree or another. Usually their moving habits were based on a need for new natural resources when these resources were used beyond repair in older areas. Many of our world empires were developed as a product of this resource search.

Like natural populations, it was only natural for the human population to move to 'greener pastures' when the old ones were ruined. In the U.S. our march across the continent was one based on a search for usable resources. I suppose the best word to use for this search is Exploitation.

Man has been successful, as a species, in exploiting all known environments ot some degree. The problem that exists now is that as the population has forced man to seek newer and better environments he has suddenly come to the realization that he has circum-populated the world and new environments are now no longer that available. From such startling discoveries has developed the almost world wide acceptance of Land Conservation.

Conservation, unlike exploitation, implies limits and replacement. There are four basic reasons for land conservation, especially in an industrial society.

1. Conservation of natural (basically untouched areas) areas as a reserve pool for food production, water reserve, and recreation.

The most important reason for preserving the 'Wild' areas is not for the protection of big game animals, or for a nice place to "go fishing" away from the city. However, so limited is our research into the exploitation of most of our wild plants and animals for food production, and so lacking is our knowledge of the total effect of organisims to each other and their environment that these areas must be protected for future research resources.

2. Conservation of land areas which have been destroyed beyond present productive use.

Populations, especially large population aggregations demand the optimum use of the surroundings. Because of this, environmental decline has occured in areas to such an extent as to yeild the area completely useless for any type of exploitation. These areas can with the right type of management be replaced and reused. The time it takes for rejuvenation however, is long and only a national or world wide policy can bring about the needed results.

3. As our resources need increase, the danger of destroying more and more areas beyond repair is very possible. To keep this from happening present areas of use must be conserved with a plan of exploitation, return of areas to some useful purpose, or substitutes for resources that are in danger of being destroyed beyond repair.

4. A human population, and most especially an industrial society must for its survival depend on energy. Energy for human needs and energy for industrial needs still comes from the six environmental systems. Above all, energy sources must be preserved and exploited with extreme care.

As greater demands are put to the environment for land use, the major problems of conservation are magnified in urban areas. Urban blight, environmental decline in the cities, lack of planning in new developments and a development philosophy with a total lack of concern for the environment have led to crisis situations in many areas. These problems of urban development can be overcome with a philosophy of conservation rather than one of exploitation.

Presentation Outline

I. Introduction:
- Historical review
- Environmental decline
- Greater demand on existing land
- New used for land

II. Basic reasons for Land Conservation
- Natural environments as reserve pools
- Slow repair of destroyed land
- Greater yields for increased population

III. The Urban Environment and Land Conservation

IV. Summary and Conclusions

Questions

1. What is the basic difference between a philosophy of exploitation and one of conservation?

2. Conservation has been a word bantered about for several years now, and to some it sounds like a great thing but to others especially those people concerned with economics, profits and industrial output might balk at the word. How can a philosophy of conservation be successfully used in a society educated to a philosophy of the vandal?

3. The idea of protecting wild animals seems to be played down quite a bit. Do you believe that they have any value in and of themselves or is this just another area of man's exploitation which is being protected tntil he finds time to do a more thorough job of exploitation?

4. We have seen conservationist touted as having the answer to saving our environment. Do they? How much can they be depended upon to guide us in our urban development.

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Harold W. Helfrich, jr., The Environmental Crisis, pp. 143-156

Optional:
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Eighth Session

Services I

Presentation by: Dr. David Warren

I. INTRODUCTION:

There is a close interdependence between social and environmental changes. What might be called ecosystem processes involve the interaction of people, technology, organization, and environment. Men's efforts to satisfy fundamental needs and wants often result in a kind of social and economic pollution accompanying and related to physical pollution. The consequences of there efforts - social ills such as urban blight, poverty, racial tensions, psychological alienation, crime, extensive drug use - all reflect unbalances in the man-made environment. Men have used technology to meet their wants but, as these imbalances demonstrate, they have not been able- or have not had the foresight-to control the effects of technology.

It follows then that men have misdirected their energies and resources in striving to fulfill felt needs and wants; their priorities and the demands they have made on the productive system have been misplaced. For the productive system has performed unevenly. With regard to certain activities and services, it has been quite efficient, supplying creature comforts, a wide array of appliances, complex military hardware, highways and automobiles. The most powerful thrust in our society has been toward an ever-growing Gross National Product, 60 percent of which goes into personal consumption; 30 percent is spent by the Federal Government with half going to natural security and only a modest 15-20 percent of the national budget available for such services as health, education and community development. The public sector, so essential to improving the quality of man's environment, has been relatively slighted. Here performance so clearly falls short of being adequate, as the sometimes declining level of efficiency in furnishing services like housing, transportation, hospital and health care, municipal functions and education atlast.

And even in these areas where the productive system appears to function well, extortionately heavy indirect and partially widder costs are involved. Production may soar but at the price of great environmental damage, responsive neither to the individual nor government.

In a word the failure to establish sensible priorites among the unlimited demands men make upon increasingly limited resources and to plan accordingly for a liveable, balanced society has brought about extensive damage, physical and social, in the environment. Contributing to this failure has been the absence of any central authority or guidance to insure that men's allocation of resources use of space are related to human needs and sensibilities. A piecemeal, haphazard approach, with its attendant disorganized residential and industrial patterns, has spawned the over-congested, problem-ridden metropolis.

A national strategy to restructure the urban environment is called for, co-ordinating and integrating the separate jurisdiction at the national state and local level, fixing workable controls upon land use, developing an effective transport system, and giving adequate attention to those services so essential to improving the quality of life.

I. Introduction:
- The ecology of human services
- Problems of human services; implications and consequences

II. Interaction of People, Technology, Organization and Environment:
- Resulting imbalances of the urban environment
- Social and Economic pollution accompanying and intermeshing with physical pollution; urban blight; poverty; racial discrimination; cirme; psychological alienation.

III. Causes of Social and Economic Pollution:
- Maldistribution of national income
- Private vs. Public sectors
- Inadequate resources for services

IV. Lack of Integrated Planning and Effective Authority:
- Excessive Decentralization
- Competing jurisdictions

V. Proposed Remedies:
- National strategy for urban growth
- Restructuring of the urban environment

Questions:

1. What evidence is there of misdirection of men's energies and resources in modern society?
2. What is it that stands in the way of changing men's goals and the allocation of resources?
3. How can such a redirection best be brought about?
4. Why in the United states particularly might there be great difficulty in trying to bring about a reordering of priorities and improvement in services?

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Ninth Session

Services II

Presentation by: Dr. David Warren

INTRODUCTION:

The theme advanced in the previous session was that, through a misdirection of goals and priorities, men have created distorted societies which function poorly in furnishing that range and quality of services essential for a pleasant environment. The record of two of these services, education and crime control, points up the magnitude of the problems involved and the inadequacy of response our society has put forth.

Let us look at education first. The anomaly is that, though expenditures have grown greatly (something like 150 percent in the past ten years) with a doubling of the Federal Government's contribution, there is much dissatisfaction with the progress made. Here to marked imbalance exists, especially in the educational level of children from lower income families and the inner-city ghettoes. For them, the dropout rate is 30 percent; many are functional illiterates. Early cultural impoverishment puts them at an initial disadvantage with their peers from the middle class and the suburbs, a disadvantage that widens over the shcool years. Spending prioritie, some critics claim, are reversed, with the least amount being spent on a percapita basis in the crucially important early elementary years and the most in the college years. The Coleman Report brings out that disadvantaged children are in greater need of better instruction and are stimulated educationally through participation in class with middle income children.

To reduce the sharp disparities in educational opportunities and accomplishments, various proposals have been suggested and tried on small scales. Busing, however desirable as a way to bring about integration of children from different backgrounds, has run into major obstacles that virtually rule out its political feasibility. Other programs, accepting the reality of defacto housing and school segregation, have had only modest success, stressing compensatory and educational enrichment efforts. Proposed but not yet put into effect widely is the so-called consumer choice plan, encouraging competition of private professional experimental groups with the public schools. Community control over its own schools has likewise been advanced. Yet all these projects together have had small impact in solving the problem of the educationally disadvantaged child, with all connotes for the development of society.

As for crime control, the ineffectiveness of community action is pointed up by the much faster growth of major crime than population, at a rate of 15 to 20 percent a year. And by far much more crime goes unrecorded, particularly in some inner-city areas where it may be as high as 1000 percent over the official figures, another striking indication of the social imbalance in man's environment. The causes are to be found in a number of factors; a high population growth, especially the young, who are more prone to crime; the outgrowth of an urbanized society and uprooted people; the correlation of a high incidence of violent crime with lower-income groups, widespread ownership of guns and cars in the U.S.; and the permeation of American culture with violence.

Solutions to what is regarded by most Americans as the nation's number one problem are not easily found. Despite the clamor for tougher penalties, the evidence does not bear out their efficacy. Some suggest certainty of punishment would be a greater deterrent, since less than one quarter of the crimes committed in the United States lead to arrests and many of these arrested are not convicted. But this could only be done if the court systems were substantially enlarged and revamped. Now would more policemen be the answer to a spiraling crime rate, since

research has failed to show any correlation between the number of police and the crime rate. Higher salaries, better training and equipment are necessary, but these measures cannot be expected to yield marked results. In fact, the federal anti-crime program has been critized for subsidizing, the old techniques (police hardware) and not encouraging new methods of crime control through juvenile programs, rehabilitation, prevention of drug abuse, judicial and correctional reforms, etc..

Presentation Outline

I. Introduction:
- Review of major services needed for survival
- Education, Crime

II. Ecological Problems of Education:
- Spatial distribution of educational services in the urban region
- Virtual failure of the school system in the inner city

III. Approaches to the Problem: Assessment:
- Integration and busing
- Compensatory Education
-Consumer Choice plan
- Student monetary incentives

IV. Ecological Problems of Law and Order:
- Increasing incidence of crime
- Spatial distribution of crime
- Inadequacy of rehailitation efforts
- Corrective measures
- Penal reform

V. Summary and Conclusions:

Questions:

1. How does one explain the anomaly of greatly increased expenditures on education and the disappointing results flowing from these expenditures?

2. Is compensatory education desirable and practicable?

3. What prospects of success does the consumer choice plan have in your judgment? Why?

4. What approaches to crime control seem to you to offer the best hope of working? Why?

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Anderson, Politics and Environment, pp. 152-169
Gordon, Sick Cities, Chapters 6, 8, and 9.

Tenth Session

Services III

Presentation by: Dr. David Warren

INTRODUCTION:

The prevalence of poverty forcefully dramatizes the disequilibrium the lack of balance in the American social environment. It seems almost incredible today that as recently as the early 60's such a large group of Americans could have been so invisible to their more fortunate brothers. Though the percentage of the population classified as poor has fallen greatly since the start of the century, as of 1970 there are still 13% or 26 million in this category.

Who are the poor? One half are children, a quarter aged, one third negro families, one third without fathers. They are concentrated in the metropolitan slums; 30 percent of the poor live in the inner cities. Thirteen percent are on the farms, scattered throughout Appalachia, the Southwest and the rural South.

When affluent America became aware of, the dimensions of the poverty problem, it undertook a multi-pronged "war on poverty," Hastily conceived and executed and thus subject to constant criticism. It was recognized that better education must be provided for children of the poor if they were to be salvaged from a sub-culture of poverty. Because, typically, the number of unemployed amont them was disproportionately high, job training programs were emphasized and, since their physical surroundings were so bleak, adequate housing was regarded as a matter of priority.

To deal with unemployment, the newly created (1964) Office of Economic Opportunity (OEO) coordinated the work of federal, state and local agencies dealing with the needy. Over a thousand cities set up Community Action Programs to help the jobless find work, to give them job training, to assist them in getting better housing etc.. Programs got underway aimed particularly at disadvantaged youth - The Job Corps, Neighborhood Youth Corps, Operation Head-Start, Work-Study. Others benefited from varied vocational training projects.

For those among the poor who could not work or were jobless, there was welfare assistance. Its recipients increased by 60 percent from 1959 to 1969, necessitating a doubling of expenditures. By 1970, 9 million were on welfare rolls at a cost of $9 billion. The welfare program came under heavy attack for its inadequacy, bureaucratic inefficiency, excessive paternalism, and alleged responsibility for perpetuating a poverty cycle. A Family Assistance Program of an assured minimum income to the needy, endorsed by the Nixon Administration, would, if enacted, largely replace the existing cumbersome welfare system.

The haphazard development of transportation and the resulting diseguilibrim offers another vivid example of our planlessners, our failure to gauge the consequences of particular modes of behavior. America's infatuation with the automobile has not only fouled the air men breathe; it has also led to the misappropriation of huge chunks of valuable land given over to highways and the obsolescence of public transportation systems. Today the need for expanded mass transport facilities is great, yet we neglect significant action in this area, continuing to pursue such contradictory policies as calling for a national effort against all forms of pollution and at the same time planning more highway construction at enoumous cost in environmental impact.

There is no question about man's ability to build pollution-free mass transit systems. But the record of performance has thus far been poor. Public transportation, except for air travel, has been allowed to decay. Only San Francisco among the American cities has constructed new facilities in the past 60 years. Hopefully, however, a number of others plan to build automated rapid transit systems in the 70's,

While the Federal Government has passed legislation subsidizing such efforts, it has not appropriated the necessary funds. Yet through efficient mass transit might well be found a means to check decay in the metropolis and to revive the flagging core cities.

Presentation Outline

I. Introduction:
- Two problems to be presented in this program; poverty and transportation
- Emphasis is on ecological dimension

II. Poverty:
- Poverty as a social, political and economic problem
- Ecological dimension of poverty; spatial distribution of resources, production and consumption
- Concerted efforts; governmental and private
- Welfare; assessment of programs

III. Transportation:
- Obsolescence of public transportation in urban environment
- Mass transit as a remedy
- Efforts to improve mass transit

IV. Summary and Conclusions:

Questions

1. Why was there such a belated recognition of the existence of extensive poverty in the United States?

2. How do you account for the limited success of the various programs undertaken to reduce poverty?

3. Do you believe that a family assistance program would be a subtantial improvement over the existing welfare program? Why or why not?

4. What do you perceive as the biggest obstacles to the widespread establishment of mass transit systems in the United States? Can they be overcome?

Bibliography

Required
Anderson, Politics and Environment, pp. 169-181
Gordon, Sick Cities, Chapter 2

Optional
Natheniel Owings, Mass Transit and the Cities, Current History, August 1970

ELEVENTH SESSION

HOUSING AND URBAN PLANNING

Presentation by: Dr. Gamal Zaki
(Mr. Kellem will discuss the master plan of the city of Providence)

I. INTRODUCTION:

1. Housing is one of the most important elements of human survival. Housing is both a product and a process. As a product, it is more than structures and enclosed space. It includes all of the immediate physical environment, both within and outside of buildings, in which families and households live, grow, and decline. It is largely man made. Its primary functions are three: to provide (1) comfortable shelter; (2) a proper setting, both within the structure and in its neighborhood, for the day-to-day activities of families and households, of small, informal groups of children and adults, and of the individuals who make them up; and (3) the locus or location of families and other groups within the larger physical pattern of the locality.

2. Housing includes all immediate physical environment in which the individual satisfies his daily needs; i.e., social, cultural, economic, educational, etc.. When we select a housing unit for residency, we consider all these factors. It is not the housing unit alone which determines our selection.

3. Since man existed on earth, shelter has been one of his main concerns. Man lived in aggregates for survival. He shared with others many of the services a community may provide for its members. When man mastered the techniques of agriculture, the first human settlement was established. His shelter was close to his land. With the development of commercial and industrial centers, man moved to these centers and lived near the factory or business area.

4. One dimension of ecological organization of the human community is manifested in the spatial distribution of its human and physical elements and their interrelationships. The study of housing conditions reflects the use and abuse of the human environment. As we have already established, housing is one of the basic human needs. How is this need met and satisfied in the urban community? What are the effects of housing on human behavior? Is there a causal relationship? What are the implications? These are some of the questions we will be probing in this program.

II. SCOPE OF THE HOUSING PROBLEM:

1. One of the most enduring sources of controversy and misunderstanding in urban affairs has been the issue of housing needs. At bottom, they are, at any moment of time, the needs of the families and other households who do not have a "decent home and a suitable living environment". Overwhelmingly, these households are among the poor, the near poor, and the lower economic middle class.

2. By its very nature, the housing problem is acute and cumulative. It is governed by the law of supply and demand. Some observations may help us understand the size of the problem.

a. The nation has made a phenomenal record over the last two decades in building housing for the middle and affluent classes, mainly at the edges of the central cities and in the suburbs. Government policy has provided significant incentives and help in the creation of the movement of the middle class tax payers from the center of the city to the suburb.
b. Low-rent public housing built since the thirties and other programs to raise the housing standards of the poor are still inadequate measures to solve the problem. The very poor have been virtually excluded.
c. Over the last decades, Government action through urban renewal, highway programs, demolition on public housing sites, code enforcement, and other programs has destroyed more housing for the poor than government at all levels has built for them.

d. Urban renewall has essentially been irrelevant to the housing needs of the poor. While the centers of some of our cities have been transformed by urban renewel into attractive business and higher income residential districts with a consequent strengthening of local tax base, very little low-income housing has been built on renewal sites.
e. The 1970 census figures indicate the loss of many cities of its population. The suburbs are attracting more population than before, which means that our efforts to attract people either to return or stay in the city through urban renewal programs have been unsuccessful.
f. Over the years accomplishments in subsidized housing are extremely inadequate. The Nation in 30 years of public housing built fewer units than Congress, back in 1949, said were needed in the immediate next 6 years.

These observations may reflect the scope and the size of the housing problem in our society.

III. HOUSING AND ITS EFFECTS:

1. The results of many studies indicated that there are relationships between housing conditions and human behavior in general. We will review some of these relations.
   a. Effects of House and Neighborhood: The results of many studies indicate an emotional relationship between man and his dwelling and its environment. Any physical move is a social move, and evidence of aspiration and a functional step in improving one's social or economic situation.
   Living in poor housing itself influences self-evaluation and motivation. Pessimism and passivity present the most difficult barriers to rehabilitating neighborhoods or relocating families.
   b. Results of studies indicated caused relationships between housing conditions and health:
   - Acute respiratory infections (colds, brochitis, etc.) related to multiple use of toilet and water facilities, inadequate heating or ventilation, inadequate and crowded sleeping arrangements. Certain infectious diseases of childhood are related to similar factors. Injuries from home accidents, related to crowded or inadequate kitchens, poor electrical connections, and poorly lighted stairs. Lead poisoning in children from eating scaling old paint. Improved housing reduces the incidence of illness and death.
   c. Most research attention has been paid to the adequacy of interral space - or its inadequacy, which is crowding. Crowding appears to be the major housing characteristic that influences health. Crowding leads to the loss of the sense of individuality. It has great effect on the socialization process of children, especially regarding sexual behavior, and parents control. Also, it is evident that crowding pushes family members to spend most of their time outdoors.

2. The neighborhood and the community have similar effects on human behavior. Studies indicated that crowded neighborhoods create irritability and weariness. Pollution, in all its types influence human reaction to his community. The inadequate crowded and overloaded institutions create problems to the residents of the urban community. Congestion, noise, accidents, and the increasing rate of crime on the streets are all manifestations of the failure of man to develop his environment. It has been accepted that cities have no problems; it is people who have the problems, they have created them and they are able to solve them if they so desire.

IV. URBAN PLANNING: THE ANSWER TO URBAN BLIGHT

1. The problems of housing cannot be separated from the problems of the total urban region. Housing embraces more than the housing unit. It includes the total community of man where he can satisfy his basic needs for survival.

2. The city is not only loosing its population, but its center is loosing its functions.

e. The broadest, most comprehensive and possibly the most difficult to apply in practice, is urban planning. It is based on the commonplace observation - that human affairs exhibit intricate interdependence within a complex group, community or society. In particular, the planning approach stems from the interrelations of human needs and institutions in the organic solidarity of modern urbanized societies. Planning, therefore, involves broad knowledge, coordinated programs, and a continuing optimism about the effects of unfamiliar controls.

4. It would be more appropriate to indicate that what is needed is Ecological Planning. Such planning would coordinate all efforts of different agencies in their efforts to control the human environment and save it from decade. This new institution should operate on all geographical levels. It should take into consideration the problems of the human habitat and the coordination of efforts to solve them.

Presentation Outline

I. Introduction:
- Definitions
- The need for housing
- Ecological organization and housing

II. Scope of the Housing Problem:
- Nature of the problem
- Private and Government sectors
- Loss of population of cities and movement to suburbs

III. HOUSING and Its Effects:
- Is there a causal relationship?
- Housing and health
- Overcrowding
- Neighborhood conditions

IV. Urban Planning:
- The need for planning
- Master plans and zoning

V. Summary and Discussion

Questions

1. Would the change in physical environment lead to change in behavior? A case in point is housing projects. Do we expect people to change their patterns of behavior in a desirable direction when they are relocated in housing projects?

2. What are some of the criticism directed to Government housing projects?

3. The objective of Model Cities Program is to coordinate and plan programs within the city, how would that relate to the suggestion of establishing an ecological planning institution?

4. How can we solve the problem of housing the poor? Are there any solutions for this problem?

5. Are corrective planning efforts inadequate; i.e. Master plan, Zoning etc...?

6. What are the possible solutions to solve the problems of industry located in the heart of the city?

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2. U.S. Dept. of HUD, Science and the City, Pamphlet
3. The American Federationist, The Urban Crisis, Pamphlet

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1. National Commission on Urban Problems, Building The American City, U.S. Government Printing Office, 1969, Part II, Chapters 1 and 2.

2. Alvin Boskoff, The Sociology of Urban Regions, Chapters 16 and 17.

3. Wheaton et. al, Urban Housing, Free Press, 1966, Reference book.

4. Roger Starr, Urban Choices, Pelican, 1969

TWELVTH SESSION

Pollution I

Presentation by: Mr. Lee Gardner

INTRODUCTION

Pollution defined, is simply an excess of waste products. This excess is brought about by several factors. Two of the most evident ones are large population aggregations which do not have adequate storage or disposal facilities. The second is an accelerated world wide industrial production. The two factors are complicated by the fact that the saprobe system works on a very slow timetable. Recycling, as a natural process for reducing excess waste material is unworkable in an industrial nation. Therefore pollution exists.

There are many types of pollution but the basic types which seem to be of political and social concern at this time are: Air, water, sound, heat, and radio-active pollutions.

Although the press has made us very aware of pollution per sa, it has done little to point out the polluter. Basically, in fact, in all pollution situations, individuals are responsible for pollution, i.e., Individuals in the home. Individuals in the industrial complex. Individuals in our food producing industries.

In all the cases of pollution the cause can be traced back to the requirements and demands of populations which are overusing their environment.

A typical case, and one that can be applied to any pollution problem, is the handling of solid wastes which come from individual consumers. In this particular case responsibility of pollution is always placed on the shoulders of "they". The buck is passed, so to speak, from the individual who can't solve the worlds problems by himself, to the municipality which can't solve the problem because of lack of government backing for research, to industries who can't solve the problem because it is not their fault as long as individuals demand products from industry which cause pollution.

The problems of pollution can be solved. But it will require an effort on the part of all responsible parties. A test area where this can actually be done is on the one problem that is traced back directly to individuals...the disposal of waste from the home.

Presentation Outline

I. Introduction:
- Types of pollution; air, water, sound, thermal, radio active (etc.)

II. Types of Polluters:
- Individuals
- Industries
- Farmers
- Consumer demand and advertisement

III. Solid Waste Disposal; Example of a Problem.

IV. Summary and Conclusions

Questions

1. Would the reduction of the world population actually affect pollution problems?

2. Inviewing the decline in urban environments we see that pollution is either a contributing factor, or at least a result of this decline. Is it possible that tax reward and punishments could be used as a successful method in holding polluters responsible for cleaning up their mess?

3. What are the biggest drawbacks to "punishing" or controlling polluters of farming industries?

4. Where does scientific research fit into the picture of solving the pollution problem?

5. Would you call the pollution problem a crisis and if so why would you use that term? How does man traditionally solve crisis situations?

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THIRTEENTH SESSION

Pollution II

Presentation by: Dr. David Warren

INTRODUCTION:

Concern over environmental damage in the United States is not new; it goes back to the conservation and reclamation movement of the Roosevelt-Pichot era and was carried further in the 1930's through such measures as the Soil Conservation Act. Today, however, emphasis has shifted from rural areas and the soil to cities and the air. As Kenneth Building has pointed out, technological and productive processes create bad as well as good products, but too often the bad products do not have negative prices attached to them. All the clamor over environmental damage will accomplish little until political action is taken. Yet the difficulty is that any meaningful political action has an effect on the distribution of income and wealth, thereby creating real conflicts of interest and opposition. Thus many anti-pollution local laws, state and national, are on the statute books, but they are frequently unenforced or provide numerous exemptions.

Since the late 1940's, a substantial effort has been made to reduce municipal and industrial sources of water pollution. In the past six years particularly, some real measure of success has been achieved with the development of a federal water quality standards program applicable to all the states. A start in dealing with oil, thermal and vessel pollution has been initiated. With regard to pollution of the oceans, cooperation among governments led to an international convention to prevent pollution by oil, administered by the International Maritime Consultative Organization (IMCO). A conference held in 1967 urged governments to hand out stiffer penalties for oil pollution; response, however, has been slow. Further, the Ford and Agricultural Organization, and inter-governmental body, discussed oil pollution in 1969 and will hold a technical conference in late 1970 to pool information on the effects of maritime pollution on living resources and how to deal with it.

The Federal Government has also launched an attack on air pollution through the Clean Air Act of 1965 and the Air Quality Act of 1967. It set afoot a solid wastes control program to cut back accumulation of refuse and to encourage more efficient use and reuse of materials and energies. Capping all of this legislative effort was the National Environmental Policy Act of 1969, laying down goals and guidelines. In order to carry out these laws, the President by executive order has set up a new independent Environmental Protection Agency, responsible for dealing with all kinds of environmental pollution. The general policies it will execute will be laid down by the recently established Council on Environmental Quality, located in the Executive Office. Clearly, everything brings on Congressional support for these actions. Outlays by governments at all levels will have to be vastly increased to cope with environmental pollution, amounting over the next two decades to perhaps $150 billion. It's estimated that industry will have to match this expenditure if the tide of pollution is to be pushed back.

Presentation Outline

I. Introduction:

- Pollution; the emerging problem
- Where do we stand?

II. Anti-pollution Measures; degree of Effectiveness?

- Survey of attempts at water pollution control, Development of water quality standards program, programs to prevent oil, thermal and vessel pollution.

- Efforts to reduce air contamination: Industrial and Governmental actions, impact of combustion engine

- Solid waste control programs

III. Reorganization of Federal Agencies of Pollution Control

IV. International Cooperation to deal with pollution of the ocean

V. Summary and Conclusions

QUESTIONS

1. Why are anti-pollution measure so difficult to carry out?

2. What is it that works against attempts to control oil pollution on the seas?

3. How important is the President's role in grappling with the problem of pollution?

Bibliography

Required Reading

Anderson, Politics and Environment, pp. 47-151 and pp. 319-335
Gordon, Sick Cities, Chapters 3,4,5,and 10.
Harold W. Helfrich, Jr., The Environmental Crisis pp. 99-125

Optional Reading

Marshall Goldman, The Cost of Fighting Pollution, Current History, August 1970

FOURTEENTH SESSION

Community Action

Presentation by: Dr. David Warren

INTRODUCTION

Community action to halt damage to and improve the quality of the environment hinges ultimately or the response of individual citizens. For all human progress and the survival of society itself are the product of individual acts. No policy, international, national or local, can succeed unless it is understood and supported, by the people themsleves. Their behavior then has to change, and this in turn requires a change in their values and perceptions. There is substantial agreement, such are the dimensions of the environmental crisis, that a serious attempt to grapple with it calls for a reordering of societies priorities and goals, the imposition of far- reaching controls, and, consequently, the acceptance by each individual of greater responsibilitv and discipline in all his actions. Only unremitting educational efforts begun early in life will bring about the transformation in behavior that is called for. Contrary trends at work in modern life make such a transformation very difficult to bring off.

But the hope remains that people, once informed, once sensitive to the ecological threat, will sustain and will themselves participate in varied activities to reduce pollution, conserve precious resources of land, water, and air, and raise the quality of life. The formation of citizen environmental groups has already done much to alter public policies. Some of these have initiated anti-pollution court suits and won their cases. A spate of legislation introduced into governmental bodies at all levels aims at far-reaching changes in American society. As one example, Senator Jackson's Natural Land Use bill would provide a national land system analysis, with each state developing a comprehensive environmental recreational and land-use plan. Now land use is so decentralized, determined by some 60,000 separate authorities with a resuling planlessness, conflict of legitimate interests, and waste of resources. Further, Senator Nelson, among other, has proposed an amendment to the Constitution that would guarantee every person's inalienable right to a decent environment. All in all, a major revision of the legal and political structure is needed, built upon a recognition of the finite resources available in the ecological system.

Yet national action alone is not enough. Since environmental damage is caused primarily by economic and industrial development, with effects spilling over and extending beyond the boundaries of national communities, cooperation at the international level is essential. The impact of technological development is to make for an increasingly interdependent world, thus requiring that each national group more and more consider the effects of its action upon others. Unfortunately, the thrust of nationalism runs in the other direction. To deal effectively with global environmental decline, world-wide controls and restraints would have to be imposed, calling for a deliberate slowing down of economic and industrial growth. The political repercussions of these restraints would be enormous. Such a policy would be especially obnoxious to the many pre-industrial countries for whom rapid economic advance is a transcendant value. Already they have shown hostility to anti-pollution proposals that threatened to retard the pace of development. Here is a conflict so serious that it could obstruct any international campaign against environmental deteroration.

Presentation Outline

I. Introduction:

- Role of Government and private sectors
- Is community action needed

II. The Need to Change Attitudes and Behavior of Individuals Towards Environment

- Role of education
- Role of Government and Private sector

III. Formation of Citizens Groups to Press for Change

- Necessity for social discipline in attacking environmental problems
- Specific programs to improve environment

IV. Governmental Activities:

- Movement for environmental bill of rights
- Legislative efforts to deal with environmental problems

V. International Community Action:

- Impact of technological development
- Depleted resources, pollution, greater interdependence of Nations
- Political implications for developing nations
- Prospects for International cooperation

QUESTIONS

1. How in your judgment, can the individual person do something meaningful about environmental damage?

2. Do you think it likely that communities will make the adjustments that appear to be called for to deal with environmental problems?

3. Assuming the United States were to make a concerted and effective response to the environmental crisis, what do you think would be the response of other developed countries? What of the reaction fo the less developed states?

Bibliography:

Required Reading

Gordon, Sick Cities, Chapters 14 and 15
Anderson, Politics and Environment, pp. 266-362
Helfrich, The Environmental Crisis, pp. 171-187

FIFTEENTH SESSION

I. Participants:

A. Dr. Zaki
B. Dr. Warren
C. Mr. Lee Gardner
D. Mr. Ralph H. Lataille, Consultant, Social Studies
R. I. Agency for Elementary & Secondary Education
E. Mr. Robert Shapiro,
Social Studies Supervisor,
Warwick School Dept.
F. Mr. Donald Driscoll,
Curriculum Director,
Providence School Dept.
G. Mr. Edward Sutton,
Social Studies Department Chairman,
Cranston High School East

II. Questions:

A. How is Ecology presently dealth with in the (K-12) curriculum picture in R.I.?

b. Where can we effectively "plug-in" ecological concepts in the curriculum?

c. Are Social Studies teachers prepared to implement these changes?

d. What role will team teaching play (Services-Social Studies)?

e. What materials are presently available?

f. What role can local and state community groups play in promoting student awareness and involvement.

Resources:

Ecology Action for R. I.

Films: R. I. Film Library
22 Hayes Street
Providence, Rhode Island 02908

Bibliography: See Appendix "D".

Appendix A

Broadcast Schedule

October		
6, 7, 8	#1	Introduction to the course
13, 14, 15	#2	The Human Environment
20, 21, 22	#3	Human Ecology, Theories and Application
27, 28, 29	#4	PopulationI
November		
3, 4, 5	#5	PopulationII
10, 12	#6	Food
17, 18, 19	#7	Land Conservation
24, 25	#8	ServicesI
December		
1, 2, 3	#9	ServicesII
8, 9, 10	#10	Services III
15, 16, 17	#11	Housing and Urban Planning
22, 23	#12	Pollution I
January		
6, 7, 8	#13	Pollution II
12, 13, 14	#14	Community Action
19, 20, 21	#15	Future and Implications for Curriculum

Tuesday - 8:00 - 8:30 a.m.
7:00 - 7:30 p.m.

Wednesday - 3:30 - 4:00 p.m.

Thursday - 3:00 - 3:30 p.m.

Appendix B

Broadcast Schedule of Films

Population Problem:	USA	October 29	7 p.m.
Population Problem:	Brazil	November 5	7 p.m.
Population Problem:	India	November 12	7 p.m.

Appendix C

Required Pamphlets

1. The Population Problem, National Educational Television, Department of Program Utilization, 10 Columbus Circle, N. Y., N. Y. 10019

2. The American Federationist, The Urban Crisis, AFL-CIO Pamphlet Division 815 Sixteenth St., N. W., Washington, D. C. 20006

3. Science and the City, U. S. Government Printing Office, Washington, D. C. 20402 45¢

Appendix D

BASIC ECOLOGY BIBLIOGRAPHY
(most prices are for paperback)

OVERVIEW OF ECOLOGICAL PROBLEMS

Borgstrum, The Hungry Planet. Collier-Macmillan. $2.95
Carson, Silent Spring. Crest. 1962. 95¢
Commoner, Science and Survival. Viking. 1967 $1.35
Ehrlich, The Population Bomb, Ballantine. 1968. 95¢
Leinwand, Air and Water Pollution. Washington Square Press. 1969. 75¢
Longgood, Poisons in Your Food. Pyramid. 1960. 95¢
Marine, America the Raped. Simon and Schuster. 1969. $5.95
Marx, The Frail Ocean. Ballantine/Sierra Club. 1967 95¢
Paddock, Famine 1975. Little Brown & Co. $2.35
Rienow and Train, Moment in the Sun. Ballantine/Sierra Club. 1967 95¢
Rudd, Pesticides and the Living Landscape. University of Wisconsin Press. $1.95
Shurcliff, SST and Sonic Boom Handbook. Ballantine, 1970 95¢
The Environmental Handbook, Ballantine, 95 ¢ (prepared especially for April 22 teach-in) (Hartford)

TEXTS AND ANTHOLOGIES

Billings, Plants and the Ecosystem Wadsworth $2.95
Buchsbaum, Basic Ecology Boxwood Press $2.35
Carvajal & munzer, Conservation Education - A Selected Bibliography, Interstate Printers, Danville, Illinois $2.50 (Elementary through high school)
Cox, Conservation Ecology Appleton-Century Crofts $4.95
Elton, Ecology of Animals. Barnes & Noble $1.65
Kormandy, Concepts of Ecology Prentice-Hall $2.95
Odum, Ecology Holt, Rinehart. $3.25
Shepard & McKinley, The Subversive Science, Essays Toward an Ecology of Man. Houghton-Mifflin. $5.95
Storer, The Web of Life Signet 95¢

THE HUMAN ANIMAL

Ardrey, The Territorial Imperative Delta-Dell 1966 $2.95
Dubos, So Human An Animal, Doubleday or Charles Scribner's Sons. 1969 $2.25
Galbraith, The Affluent Society, Mento 95¢
Michael, The Unprepared Society, Vintage 1969 $4.95
Morris, The Naked Ape. Dell. 95¢
Snyder, Earth Household. New Directions. $1.95
Whole Earth Catalog. Portola Institute. $4.00

THE FOLLOWING ARE GOOD SOURCES FOR FREE OR LOW COST INFORMATIONAL MATERIALS ON POPULATION, CONSERVATION AND ECOLOGY:

Zero Population Growth
367 State Street
Los Altos, California 94022
Newsletter, Brochures, Ecology leaflets, reprints.

Population Reference Bureau
1955 Massachusetts Avenue, N.W.
Washington, D. C. 20036
Good Bibliography, source list, and film guide population. Minimal cost.

Planned Parenthood, World Population 515 Madison Avenue New York, New York 10022	Bibliography, film guide and following reprints: "Eco-Catastrophe" by P. Ehrlich "300 Million Americans Would Be Wrong," by D. Lilienthal "The Human Race Has Maybe 35 Years Left," by D. Lyle
National Wildlife Federation 1412 - 16th Street, N.W. Washington, D.C. 20036	Conservation Directory -- a guide to all state and national sources of conservation & environment information. $1.50. Informational packets on ecology and pollution -- special packets from elementary to adult level. Excellent. Monthly newsletter.
American Association of University Women 2401 Virginia Avenue, N.W. Washington, D.C. 20037	Resource directory on pollution control. 75¢ Anti-pollution pamphlets and study guide 75¢ (excellent material)
National Parks Association 1701 - 18th Street, N.W. Washington, D. C. 20036	Free or low-cost pamphlets and articles on thermal pollution, noise pollution, pesticides, and basic ecology. Excellent.
Conservation Foundation 1250 connecticut Avenue, N.W. Washington, D.C. 20036	Variety of Pamphlets and articles dealing with the many aspects of ecology.
Sierra Club Mills Tower San Francisco, California 94104	List of publications, pollution, population information, protection of scenic areas.
Project Man's Environment National Education Assn. 1201 - 16th Street, N.W. Washington, D. C. 20036	Information on curriculum (K through 12) environmental study areas.
Isaac Walton League Of America 1326 Waukegan Road Glenview, Illinois 60025	"Clean Water -- It's Up to You" -- excellent pamphlet on what local citizens can do about water pollution. Free. Monthly conservation newsletter.
Environment Magazine 438 N. Skinker St. Louis, Missouri 63130	Monthly Publication dealing with effects of technology on the environment, published by Committee for Environmental Information. Student Subscription -- $5.00 year.
Public Affairs Pamphlets 381 Park Avenue South New York, New York 10016	pamphlet #421 - "An Environment Fit for People" - 25¢ #403 - "The Battle for Clean Air" - 25¢
Portland Center for Continuing Education P. O. Box 1491 Portland, Oregan 97207	"Observing our Environment," - #3.00, relating elementary students to environment.
Clean Water Washington, D.C. 20242	Suggestions about what communities can do to combat water pollution. Free.

Superintendent of Documents Government Printing Office Washington, D.C. 20402	"No Laughing Matter" - book of syndicated cartoons on air and water pollution. 70¢. "Primer on Waste Water Treatment" - Current and possible future methods of treating sewage and industrial wastes. 55¢ "Showdown" - picture pamphlet discussing "showdown" for water quality. 65¢. "From Sea to Shining Sea" - Presentation of environmental situation of U.S. with good bibliography, film list, and resource guide. $2.50.
The Wilderness Society 725 - 15th Street, N.W. Washington, D.C. 20005	Reports, pamphlets, reprints on preservation and use of our natural heritage.
Local Tuberculosis and Respiratory Disease A&sns.	"Air Pollution Primer"

ENVIRONMENTAL FILM LIST

This film list has been compiled from a variety of sources. Descriptions are from film libraries, producers, etc.

Other sources of free or inexpensive film loans are state university film libraries and state conservation and public health departments.

"Air Pollution: Take A Deep Deadly Breath" - 54 min., color. $35.00. Contemporary. ABC Documentary.

"Beargrass Creek" - 19 min., color. $15.00. Stuart Finley. The poignant tragedy of a small tributary stream, its promising start, and its sad end due to pollution.

"Bulldozed America" - 25 min., B/W. Carousel. Bulldozer and commercial interests tear apart countryside and turn it into supermarkets, highways, etc.

"By Land, Sea and Air" - 31 min., color. $5.00/day. Oil, Chemical and Atomic Workers Int. Union. Effects of pesticides on farm workers and environment of California.

"Challenge to Mankind" - 28 min., B/W. $8.00 Contemporary. 5 world experts speak of threat of over-population.

"Cities in Crisis" - 22 min., color. $13.00. Order #6812. Extension Media. Impressionistic film of urban sprawl and unplanned growth.

"Clean Waters" - 20 min., color. $9.00. Order #3972. Extension Media. Illustrates dangers of water pollution and shows proper sewage treatment.

"Crisis on Kanawha" - 20 min., color. $15.00. Stuart Finley. Show sources of industrial water pollution and some methods of eliminating it.

"A day at the Dump" - 15 min., color. Free. Environmental Control Administration. Story of Kenilworth Dump in Washington, D.C. and its planned conversion to a public park.

"The Everglades: Conserving A Balanced Community" - 11 min., color. $6.50. Britannica.

"First Mile Up" - 28 min., B/W. $8.00. Contemporary. Problems of air pollution and its effect on human health. Toronto and Los Angeles as examples.

"For All to Enjoy" - 20 min., color. $10.00. Conservation Foundation. Satirical approach to uncontrolled development in National Parks.

"Green City" - 23 min., color. $15.00. Stuart Finley. Civic action to preserve green space and open space as cities grow.

"Man and His Resources" - 28 min., B/W., $8.00. Contemporary.

"A Matter of Time" - 27 min., color. $10.00. Conservation Foundation. Historical approach to environmental deterioration.

"Megapolis: Cradle of the Future"- 22 min., B/W. $9.00. Britannica. Dynamics of Urbanization and emphasis on need for careful planning.

"Multiply and Subdue the Earth" - 60 min., B/W - $13.50. Color - $18.50. Indiana A-V Center. World Population Crisis.
"Noise: New Pollutant" - 30 min., B/W. $7.50. Order #7503. Extension Media
"Our Changing Environment" - 17 min., color. $8.00. Britannica. Man's increasing power to control his environment has created new pressures and problems for the modern city.
"Our Crowded Environment" - 11 min., color. $6.50. Britannica.
"Pandora's Easy Open Pop-Top Box" - 15 min., Color. Free. Environmental Control Administration. Dramatic presentation of effects of uncontrolled urbanization.
"People by the Billions" - 28 min., B/W $8.00 Contemporary.
"The Poisoned Air" - 60min., B/W. Carousel. CBS documentay.
"Poisons, Pests and People" - 55 min., B/W. $16.00 Contemporary. Grim results of indiscriminate use of pesticides on wildlife and people. Plea for intelligent approach to the problem.
"Population Ecology" - 28 min., B/W Contemporary. Britannica. Ecological consequences if population not brought under control.
"Population Explosion" - 15 min., B/W $8.00. Contemporary. Carousel.
"The Problem With Water is People" - 30 min., B/W. color. $16.00. Contemporary. Traces route of Colorado River from beginning to ocean and discusses its pollution and misuse.
"Air Pollution" - 15 min., color. $8.00. Britannica. Health problems posed by air pollution and steps being taken to correct them.
"Water Pollution" - 15 min., color. $8.00. Britannica. Health problems posed by water pollution and steps being taken to correct them.
"Progress, Pork-Barrel, and Pheasant Feathers" - 27 min., B/W $12.50. Contemporary. Fight between Army Corps of Engineers wanting to build cross-Florida canal, and conservationists in Oklawaha River Area.
"The Squeeze" - 10 min., B/W $12.00 Hank Newenhouse. Throngs of people, jammed highways, rushing commuters, starving children graphically portray population problem.
"The Third Pollution" - 30 min., color. Free. Environmental Control Administration. Excellent film which graphically describes America's $4 billion solid waste problem and demonstrates new techniques of solid waste management.
"What Are We Doing to Our World?" - two parts each 30 min. Each $11.00. Indiana A-V Center.
"Tom Lehrer Sings Pollution" - 3 min., B/W. Free. Public Health Service. (PHS also has many other heavily subscribed air pollution films.)
"Urban Sprawl" - 21 min., color. $15.00. Stuart Finley. Will we tolorate a continuing extension of urban sprawl? Or will we insist on something better?

Carousel Films, Inc.
1501 Broadway
New York, N. Y. 10036

Citizenship Legislative Dept.,
Oil,Chemical & Atomic Workers
Int'l Union.
1126 - 16th Street, N.W.
Washington, D.C. 20036

Conservation Foundation
1250 Connecticut Avenue, N.W.
Washington, D.C. 20036

Encyclopedia Britannica
Educational Corporation
425 N. Michigan Avenue
Chicagao, Illinois 60611

Hank Newenhouse
1825 Willow Road
Northfield, Illinois 60093

McGraw Hill Contemporary
Film Rental Offices:
1714 Stockton Street
San Francisco, California

828 Custer Avenue
Evanston, Illinois 60202

330 W. 42nd Street
New York, New York 10036

Public Health Service
Audio Visual Facility
Atlanta, Georgia 30333

Environmental Control Administration
12720 Twinbrook Parkway
Rockville, Maryland 20852
Attn: Tom Edgar

Extension Media Center
University of California
Berkeley, California 94720

Field Service
Indiana University
A-V Center
Bloomington, Indiana 47401

Stuart Finley Productions
3428 Mansfield Road
Falls Church, Va. 22041

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